

comprising:

a chamber for sealingly storing a laser gas therein;
a discharging electrode for exciting the laser gas
through electrical discharging;

a total reflection mirror for amplifying laser light
produced by the electrical discharging from said discharging
electrode;

an output window for amplifying the laser light and
for outputting a portion of the laser light amplified between
said total reflection mirror and said output window;

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Cont.
a blower for circulating the laser gas within said
chamber, so that the laser gas passing an electrical discharging
region of said discharging electrode is circulated in said
chamber and is returned to the electrical discharging region of
said discharging electrode; and

control means for controlling said blower in
accordance with a state of the electrical discharging from said
discharging electrode, including first means for controlling
rotation of the blower in a stand-by state in which no laser gas
is excited by the electrical discharging from said discharging
electrode and thus no laser light is emitted whereas an output of
the laser light is being prepared, and second means for
controlling rotation of the blower in an in-operation state in
which the laser gas is excited by the electrical discharging from

said discharge electrode and the laser light is being outputted.

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2. (Three Times Amended) A gas laser device according to Claim 1, wherein said first rotation control means controls rotation of said blower when said gas laser device is in the stand-by state by stopping the blower.

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8. (Three Times Amended) A gas laser device according to Claim 7, wherein said first rotation control means controls rotation of said blower when said gas laser device is in the stand-by state by stopping the blower.

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13. An exposure apparatus, comprising:
a laser light source having (i) a chamber for sealingly storing a laser gas therein, (ii) a discharging electrode for exciting the laser gas through electrical discharging, (iii) a total reflection mirror for amplifying laser light produced by the electrical discharging from said discharging electrode, (iv) an output window for amplifying the laser light and for outputting a portion of the laser light amplified between said total reflection mirror and said output window, and (v) a blower for circulating the laser gas within said chamber so that the laser gas passing an electrical discharging region of said discharging electrode is circulated in

said chamber and is returned to the electrical discharging region of said discharging electrode;

a main assembly for exposing a substrate to the laser light from said laser light source; and

control means for controlling said blower in accordance with a state of electrical discharging of said discharging electrode including first means for controlling rotation of the blower in a non-exposure-operating state in which no laser gas is excited by the electrical discharging from said discharging electrode and thus no laser light is emitted whereas an output of the laser light is being prepared, and second means for controlling rotation of the blower in an exposure state in which the laser gas is excited by electrical discharging from said discharging electrode and the laser light is being outputted.

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C6

C4
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C6

14. (Twice Amended) ^{exposure} An apparatus according to

Claim 13, wherein said control means further comprises means for increasing a rotation speed of said blower in response to a start of an exposure job in which the exposure operation is performed through said main assembly.

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20. (Three Times Amended) A semiconductor device manufacturing method comprising.

sub C6
D10

sealingly storing a laser gas in a chamber;
exciting, using a discharging electrode, the laser
gas through electrical discharge;

amplifying laser light produced by the electrical
discharging from said discharging electrode by a total
reflection mirror;

amplifying the laser light by an output window and
outputting a portion of the laser light amplified between said
total reflection mirror and said output window;

*C6
cancel.*
circulating, using a blower, the laser gas within
the chamber, so that the laser gas passing an electrical
discharging region of the discharging electrode is circulated
in the chamber and is returned to the electrical discharging
region of the discharging electrode; and

controlling rotation of the blower in accordance
with a state of electrical discharging from said discharging
electrode including controlling rotation of the blower in a
stand-by state in which no laser gas is excited by the
electrical discharging from said discharging electrode and thus
no laser light is emitted whereas an output of the laser light
is being prepared, and differently controlling rotation of the
blower in an in-operation state in which the laser gas is
excited by the electrical discharging from said discharge
electrode and the laser light is being outputted.